CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.15/MLN/CSR.4/820d/CEMENT/2015-16 Date: 23.04.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. M. Lakshmi Narayana,** Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.
*NAME OF THE WORK	:	Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	20.04.2015
PERIOD OF TESTING	:	20.04.2015 to 23.04.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	160 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	495 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.15/MLN/CSR.4/820d/SAND Gradation/2015-16 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. M. Lakshmi Narayana,** Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.
* Name of Work	: Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Technical Reference	: IS : 2386 Part 1 - 1963 RA-2007
Sample ID	: Fine Aggregates
Sample Received on	: 20.04.2015
Date of Testing	: 23.04.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.77	90-100	90-100	90-100	95-100
2.36	81.39	60-95	75-100	85-100	95-100
1.18	58.70	30-70	55-90	75-100	90-100
600 Micron	27.86	15-34	35-59	60-79	80-100
300 Micron	15.18	5-20	8-30	12-40	15-50
150 Micron	5.82	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Zone-I specific limits.

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T-2377

Job No.: CTCE/BBMP/W.No.15/MLN/CSR.4/820d/CC Solid Block/2015-16 : 25.04.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. M. Lakshmi Narayana,** Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.
* Name of the Work	: Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Sample Received on	: 20.04.2015
Date of Testing	: 25.04.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	36.35	262.3	3.28	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	34.28	258.4	3.23	
3	Block 3	35.96	261.7	3.27	
4	Block 4	36.23	264.8	3.31	
5	Block 5	36.47	265.6	3.32	
6	Block 6	35.15	262.4	3.28	
7	Block 7	36.92	261.9	3.27	
8	Block 8	34.58	259.8	3.25	

*Information is furnished by the Customer/Representative.

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T-2377

Job No.: CTCE/BBMP/W.No.15/M.L.N/CSR.4/820d/Pre slab/2015-16 15.05.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. M. Lakshmi Narayana,** Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.
* Name of work	:	Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.
Referece	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on		10.05.2015
Date of Testing	:	15.05.2015
Grade of Concrete	:	M_{30}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.387	2559.71	1.54	0.955	32.35	16.48	17.79	16.99	21.24
2	50.00	79.00	0.396	2552.93	1.58	0.960	32.80	16.70	18.04	17.32	21.65
3	50.00	81.00	0.408	2565.34	1.62	0.965	33.75	17.19	18.56	17.91	22.39

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Job No.: CTCE/BBMP/W.No.15/MLN/CSR.4/820d/AGG/GR/2014-15 : 23.04.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. M. Lakshmi Narayana,** Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.
* Name of Work	: Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 20.04.2015
Date of Testing	: 23.04.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.75	95-100	85-100
20	50.25	30-70	0-20
10	25.50	10-35	0-5
4.75	3.20	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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T-2377

Job No.: CTCE/BBMP/W.No.15/MLN/CSR.4/820d/CUBE/2015-16

24.05.2015

TEST REPORT ON CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. M. Lakshmi Narayana,**
Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.

*** Name of the work** : Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as o: 28^{th} day

Sample Received on : 26.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.04.2015	24.05.2015	8.274	376.4	16.73
2	26.04.2015	24.05.2015	8.163	368.2	16.36
3	26.04.2015	24.05.2015	8.328	389.7	17.32

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Job No.: CTCE/BBMP/W.No.15/MLN/WMM/Gradation/2015-16

14.05.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. M. Lakshmi Narayana,**
Sri Anjanadhri Nilaya, No.354, 5th A Cross, K.H. Road, Sharadambhanagara, Jalahalli, Bangalore – 560 013.

Name of Work : Improvements and Construction of CC Road and Drain at Officers Model Colony 1st and 3rd Cross Parallel to Pipe line Road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Date of Testing : 14.05.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25200**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	980	980	3.9	96.1	95-100
22.4	4235	5215	20.7	79.3	60-80
11.2	5660	10875	43.2	56.8	40-60
4.75	4285	15160	60.2	39.8	25-40
2.36	3530	18690	74.2	25.8	15-30
0.600	2675	21365	84.8	15.2	8-22
0.075	2490	23855	94.7	5.3	0-8

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